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ABSTRACT

This paper describes the purposes of educational evaluation with particular emphasis on school improvement. The evaluation process used was based upon the analytical tools developed and tested by the Educational Productivity Council (EPC) of the University of Texas. An early form of this model and reporting system was introduced to a group of 68 teachers from Australia and Texas, and changes in their attitudes towards concepts of teacher evaluation, educational efficiency and classroom productivity measurement were assessed. The research group, using the EPC productivity model, identified a large number of measures which they believed could be used to describe either the outputs or objectives of the educational process. Relevant outputs included scores for reading, writing, and math performence together with affective measures of peer, teacher, and school affiliation. Classroom resource or input measures included a pupil social competency score, pupil attendance and stability measures, pupil/teacher ratios, teacher experience, the support staff available, instructional time, available budget, and classroom percentages of girls and non-minority students. Teachers participating in the research displayed positive change in their attitudes towards concepts of educational efficiency, classroom productivity, and teacher evaluation. (JD)

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TEACHER ACCEPTANCE OF EVALUATION THROUGH PRODUCTIVITY MANAGEMENT

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Introduction

The association between assessment and evaluation and school and system improvement has often provided a vehicle for profit and political expediency which has had little to do with the educational needs of individual schools, students and teachers. Andrew Strenio's The testing trap (1981), Lazarus' Goodbye to excellence: a critical look of minimum competency testing (1981) and the Nader organisation's The reign of ETS: the corporation that makes up minds (Nairn 1980) are challenging expressions of this sort of concern.

Despite these attacks, the demand for assessment and evaluation procedures in schools is so persistent that it seems that they must serve some important social purpose.

Even in Victoria, Australia where the education system is being reshaped from a traditional conservative bureacracy to a more collaborative and responsive model of social democracy, the need for an evaluative function still forms part of the current government's philosophical position.

The Victorian School Improvement Program (Fordham 1982) has been adopted by that state to enable schools 'to review their practices' so that the school community can develop 'systematic decision-making processes which provide resources and services in a way which most effectively and efficiently improves the learning experiences of all children.'

Typically the government has encouraged schools to engage in a cyclical process of evaluation, planning, implementation and re-evaluation, but regretably it has offered no substantive processes which schools and teachers could adopt for these purposes. As is often the case it seems that social rhetoric has tended to pre-empt the development of analytical tools which may be offered in support of the evaluative process.

On the other hand it is suggested by this paper that such tools do exist in procedures which have been developed and tested by The Educational Productivity Council (EPC) of the University of Texas.

The nature of the school improvement processes developed by the EPC is being described by my colleagues here today. My own interest is to outline the experiences and attitude changes of 68 Victorian and Texas teachers who, despite the more usual negative connotations associated with concepts of evaluation and accountability, have used productivity management as a positive basis for the evaluation of classroom operations

The Educational Context

The literature of educational evaluation is as profuse as it is diverse and, says Barro (1970), seems to derive its popularity for educators and educational critics from its serviceability as a unifying theme, given at least four current issues of educational thought and action:

1. The growing tendency to look at educational programs in terms of cost effectiveness;

2. The increasing concentration on education for the disadvantaged as a priority area of responsibility for schools;

3. The movement to make school systems more directly responsive to their clientele and communities, and

4. The new, national or state stimulated emphasis on the evaluation of school systems and their programs;

Although the terms "accountability and "evaluation" seem to have a popular acceptance, particularly when they are tied to such catchphrases as "being for the improvement of instruction" and "being for the benefit of children", vigorous and vocal disagreement has arisen between educators and between educators and administrators as they have attempted to

establish a mutually acceptable philosophy for the justification of quantitative evaluation procedures.

For example, Hauge (1981), in a sample of 88 school districts in Minnesota, found that all but one reported the use of evaluation for the improvement of instruction. Jones (1981), in a study of Oregon school districts, identified the major justification for teacher and school evaluation as the improvement of districts' services to students, staff, and country. A further example cited by Hauge (1981) found that, although 99% of the school districts examined in her study reported the use of evaluation information for the improvement of instruction, 50% of the same districts also reported they used the information for teacher tenure decisions, 31.8% reported they used it for teacher dismissal decisions, and 12% for salary decisions.

These responses provide some understanding of why the terms "productivity," "evaluation," "accountability," "effectiveness," and "efficiency" tend to have negative connotations for many educators.

Study after study in the field of education has reinforced this view:

> How do teachers feel about evaluation? In a word .....
> negative! (Miller, 1981:98)
> Teachers felt that evaluation had no purpose. (Miller, 1981:98)
> The evaluation process in an unpleasant experience, not supportive and much more threatening then helpful. (Miller, 1981:107)
> 70.5% of elementary school principals (in the study) said that present evaluation practices need to improve. (Hauge, 1981:119)
> Teachers reveal a negative attitude to present forms of evaluation. (Noonan, 1981:151)
> Those who manage the process (of evaluation) are more willing to stand by its adequacy than those who are managed. (Noonan, 1981:134)

Similar conclusions have been expressed by a number of teacher associations such as the National Education Association (Ficklen, 1983)

and the American Federation of Teachers (McCormick, 1983), as well as by workers in different but related fields such as the U.S. federal civil service (Silverman, 1983).

Clearly, then, there is a mismatch between the conventional justification for accountability and evaluation and the feelings and attitudes of those who are to be evaluated.

As previously suggested, these discrepancies stem from the diverse nature of the purposes and objectives which are ascribed to the evaluation process and from their potential inconsistency and incompatibility with one another.

The incompatible nature of the diverse purposes that are usually ascribed to evaluation can be illustrated by referring to five applications which have been outlined by Barro (1970):

1. The identification of effective schools so that good practices can be discovered, disseminated, and emulated;

2. The assignment and selection of personnel on the basis of the performance-related characteristics of applicants;

3. The allocation of personnel incentives and compensation as inputs in operating career ladders, incentive pay, or promotion systems;

4. The improvement of resource allocations in schools -- measures could provide guidance to district and school administrators in allocating resources differentially among schools according to educational need; and

5. The evaluation of school programs with particular emphasis on the relationship between school inputs and educational outputs.

For example, the system or school improvements which are either stated or implied in applications 1, 4, and 5 tend to be overshadowed

when the purposes described in 2 and 3 are perceived by teachers or administrators as having a personal impact. It is this sort of incompatibility and the consequent conflict which needs to be addressed and, if possible, resolved in the successful application of any productivity measurement process to school decision-making.

So, it seems that the solution to the problem of attempting to apply a school- or classroom-based productivity analysis for formative purposes with specific positive outcomes must lie with the development of some technique which, while assisting with the improvement of instruction through decision support information and the identification of effective and efficient classrooms and schools, also brings with it few or none of the personal fears, learned prejudices, and negative attitudes which are usually associated with evaluation in the minds of the classroom teacher and the school administrator.

Ideally, an acceptable evaluation system should be selected and supported by the teachers involved (Miller, 1981), encourage teacher and principal participation in establishing performance goals (Shinkfield, 1977; Carpenter, 1981; Hauge, 1981), provide opportunities for the feedback of information to teachers (Stearns, 1969; Shinkfield, 1977), make provision for a concluding reappraisal of the system by the participants (Shinkfield, 1977), focus on the processes of teacher development (Shinkfield, 1977), be known to teachers in advance of its application (Noonan, 1981), and, most importantly, espouse a philosophic base which is directly linked with the improvement of instruction (Gudridge, 1980; Redfern, 1980; Carpenter, 1981; Jones, 1981).

The Research Project

The EPC productivity model includes a management plan and quantitative analysis which provides a benchmark of classroom or school efficiency, a diagnosis of resource shortfalls and/or surpluses, identification of targets for the correction of inefficiencies and a consequent and unique plan of action for the attainment of specific objectives.

An early form of this model and reporting system was introduced to a group of 68 Victorian and Texas teachers in 1984/85 (Garrett 1985), and changes in their attitudes towards concepts of teacher evaluation, educational efficiency and classroom productivity measurement were assessed by use of the semantic differential technique developed by Osgood (1957) and his colleagues.

The teachers comprising the research group were introduced to the EPC producivity model through small discussion groups lead by the researcher. Subsequently, these teachers identified a large number of measures which they believed, could be used to describe either the outputs or objectives of the educational process and the resources or inputs used within that process.

After collection and analysis of 114 of these variables a subset of six output measures and eleven input or resource measures were selected as the basis of the EPC's productivity analysis.

Relevant outputs includes scores for reading, writing and maths performance together with affective measures of peer, teacher and school affiliation.

Classroom resource or input measures included a pupil social competency score, pupil attendance and stability measures, pupil/teacher ratios, teacher experience, the support staff available, instructional time, the discretionary budget available to the classroom teacher and classroom percentages of girls and non-minority students.

Research and statistical evidence was cited for the inclusion of these measures in the final model.

Following an evaluation of the productivity of classroom operations by Constrained Facet Analysis (CFA) (Bessent, Bessent, Clark & Elam, 1984) reports were prepared and returned to teachers for group discussion of possible managerial programs which could be developed for and implemented within individual classrooms.

Using appropriate control and comparative techniques the attitudes of the 68 research group members and a control group of 41 were then reassessed.

Results

Analysis of variance of the attitudes which research and control group members held towards concepts of educational efficiency, productivity measurement and teacher evaluation at the beginning of the project did not distinguish between the two groups thus suggesting that both groups were drawn from the same population. Yet following exposure to the EPC productivity model the differences in attitudes which treatment group and control group teachers held toward the concept of teacher evaluation were found to be significantly different in all three dimensions of the Osgood scale.

Similarly, significant differences were observed between treatment and control group members in their responses describing the evaluation and activity dimensions of the concepts of 'educational efficiency' and 'classroom productivity measurement.' On the other hand, no difference was noted in their responses to the bipolar pairs of adjectives which described the potency dimension of these latter two concepts.

The following diagrams contrast the attitudes which control and research group members held towards the three concepts at the commencement of the study and again after the research group had participated in the process of productivity analysis. (Note that the lower the value on each dimension the more favourable the attitude: 1 = positive extreme, 5 = negative extreme).

Figure 1:

Pretreatment attitude dimension scores for control and treatment groups. (1 = positive extreme)

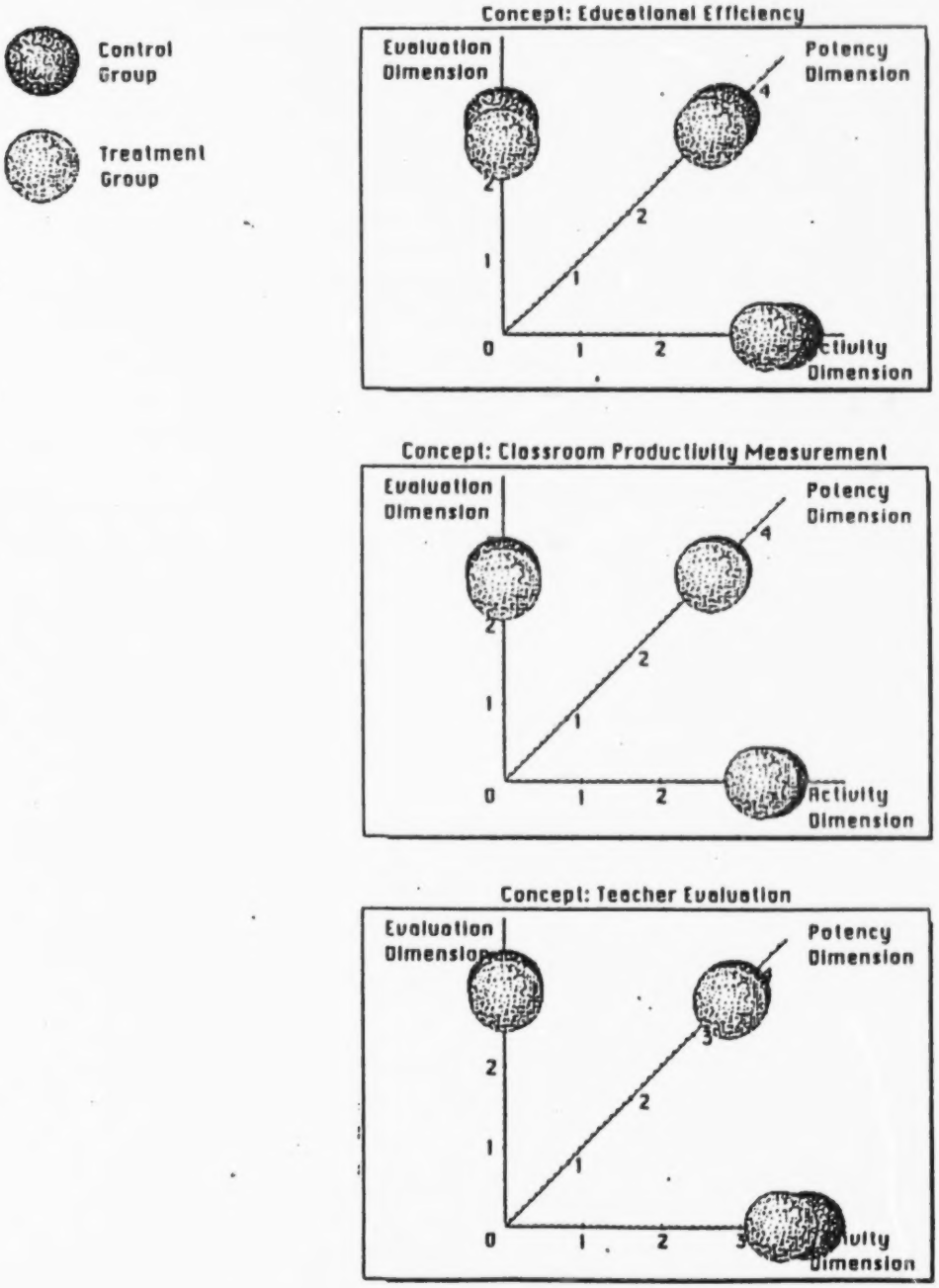


Figure 2:

Pre: and post-test attitude dimension scores of control group members. (1 = positive extreme)

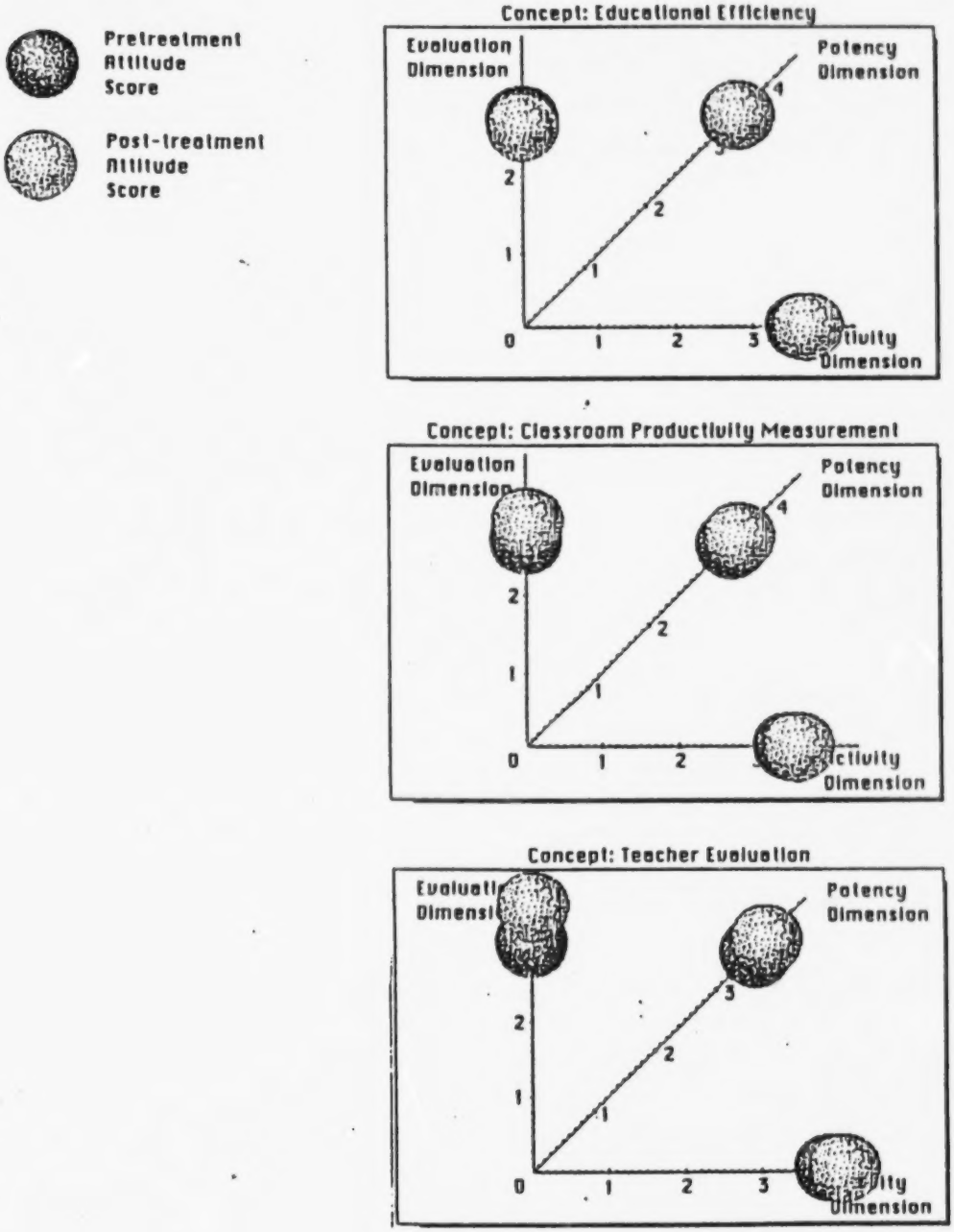


Figure 3:

Pre- and post-test attitude dimension scores of treatment group members. (1 = positive extreme)

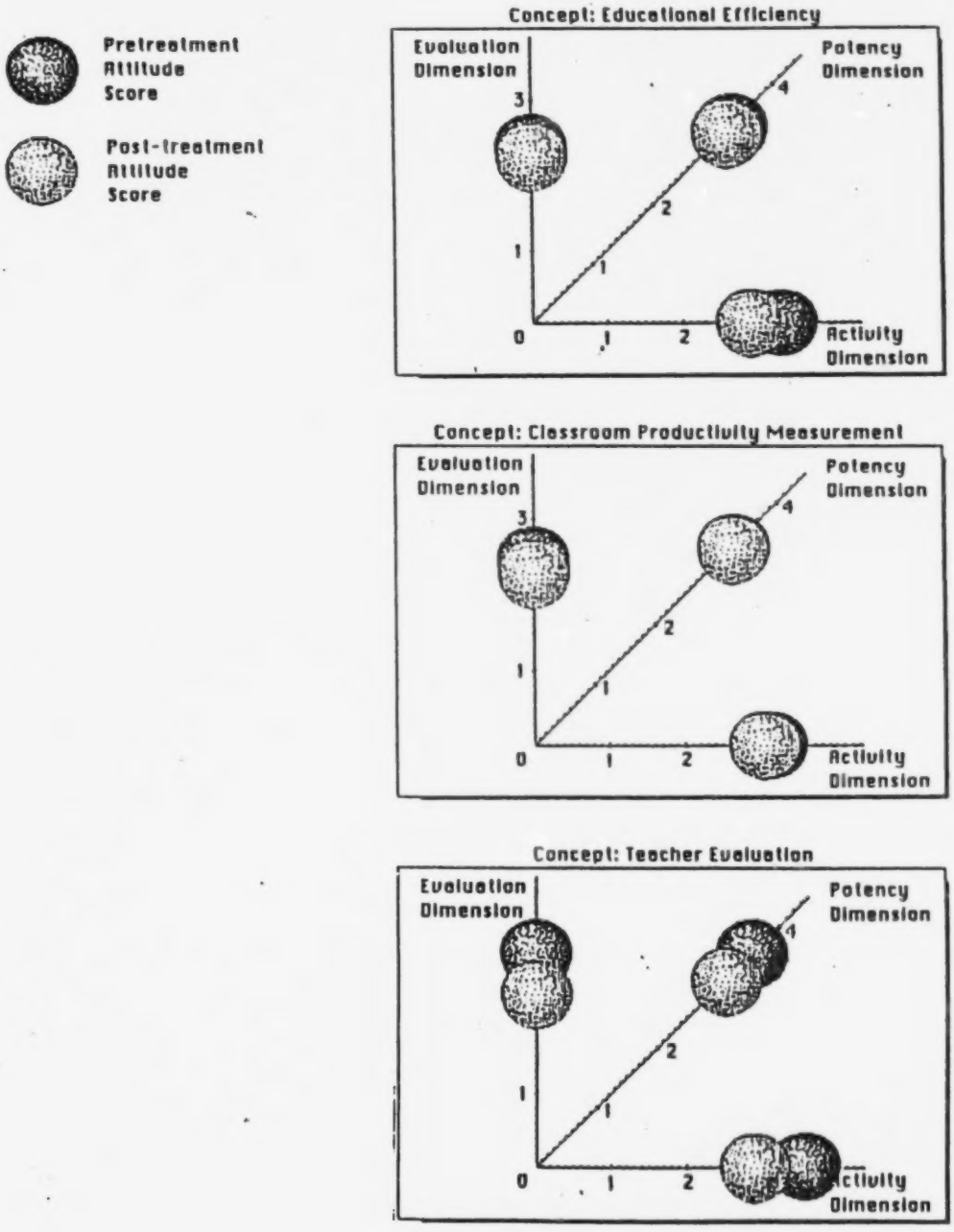
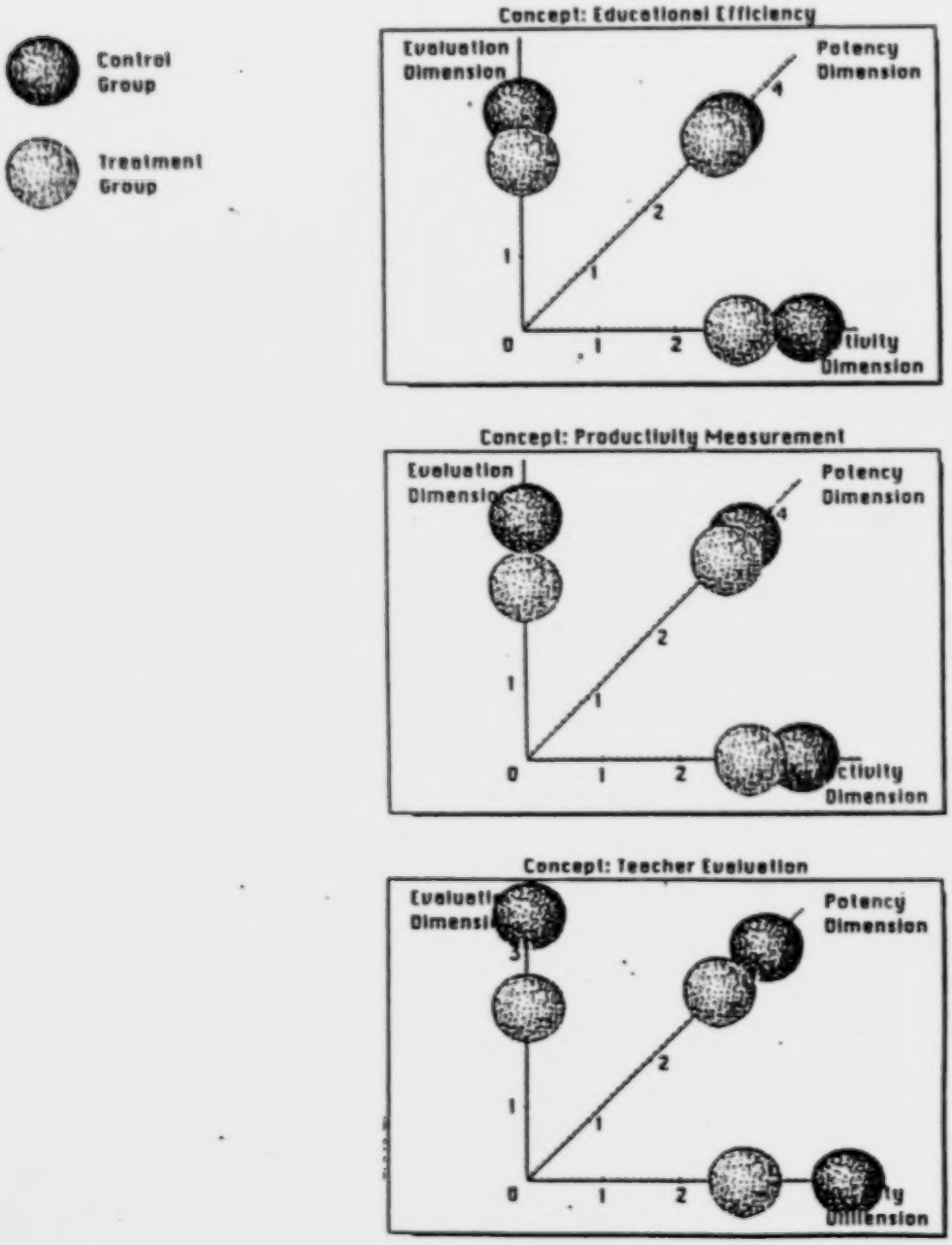


Figure 4:

Post-treatment attitude dimension scores for control and treatment groups. (1 = positive extreme)



Discussion

From Figures 1 to 4, it can be seen that there has been a significant and positive change in the attitudes held by teachers toward concepts of educational efficiency, classroom productivity, and teacher evaluation following their experiences with a classroom evaluation process and decision support system based on the EPC productivity model using Constrained Facet Analysis. A similar change was not noted in a group of teachers who did not experience the processes associated with the model.

Conclusion

Thus, it is proposed, the EPC productivity management model does meet many of the criteria suggested for a successful, useful and acceptable evaluation process. It does use criteria which are selected and supported by the teachers involved, it does encourage teacher and principal participation in establishing performance goals (and resource allocations) and it does provide an opportunity for the feedback of information to teachers. In addition there is also opportunity for an ongoing reappraisal of the system by the participants, it focuses on the processes of teacher development and is known to teachers in advance of its application.

But most importantly it espouses a philosophy which is directly linked with the improvement of instruction.

In a word, it works! Perhaps, then, we now have available a process of evaluation which is both acceptable to teachers and yet also meets the requirements the system which employs them.

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